



SD-6053

B. Arch. - I (Sem - I) Examination

May / June - 2011

Structural Design & Systems - I
(New Course)

Time : 2 Hours]

[Total Marks : 50

Instructions :

(1)

नीचे दृश्यावेक निशानीवाणी विगतो उत्तरवही पर अवश्य लपवी.
Fillup strictly the details of signs on your answer book.

Name of the Examination :

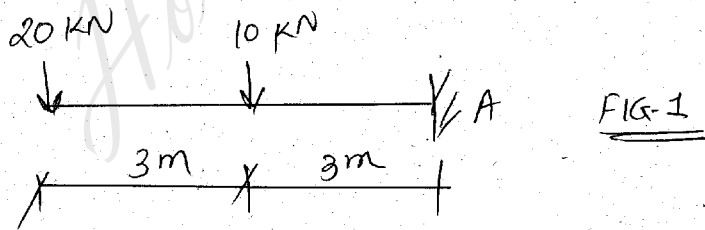
Name of the Subject :

Subject Code No. : Section No. (1, 2,.....):

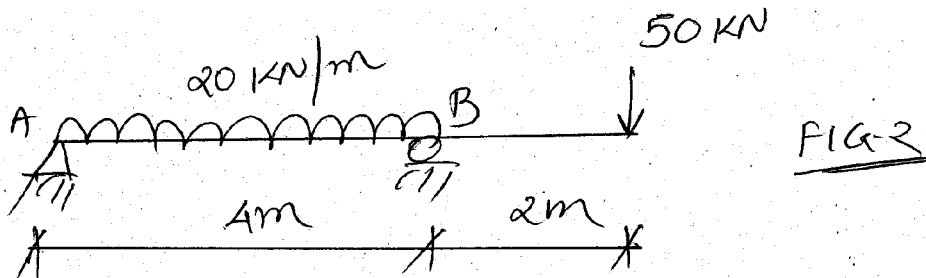
Seat No. :

Student's Signature

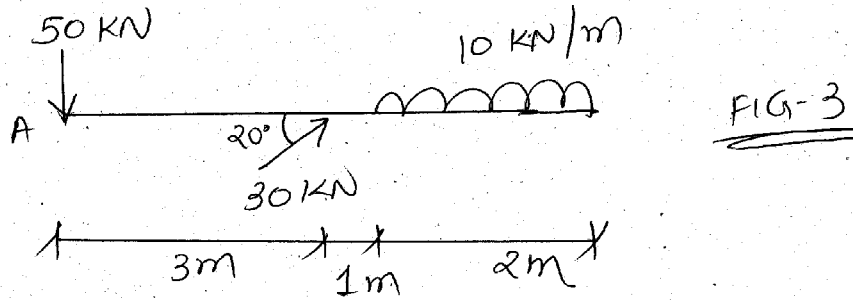
- (2) Assume suitable data and specifically mention it.
 - (3) Figures to the right indicate full marks.
 - (4) Mention your assumed sign conventions.
 - (5) Draw sketches wherever required.
 - (6) Use of Nonprogrammable scientific calculator is permitted.
- 1 Explain following terms by giving proper example : 8
Stability, equilibrium, Stiffness, Moment.
- 2 Calculate Reaction of a beam shown in **fig. 1 or fig. 2.** 10



OR

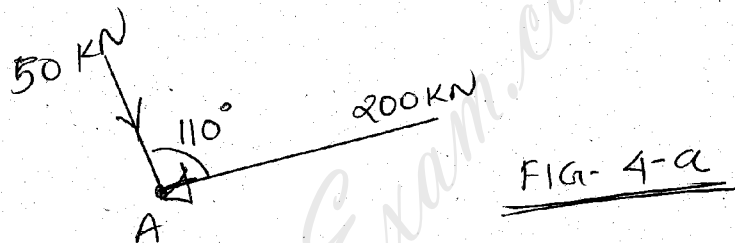


3 Calculate resultant of a given force system. Refer **fig. 3.** 8



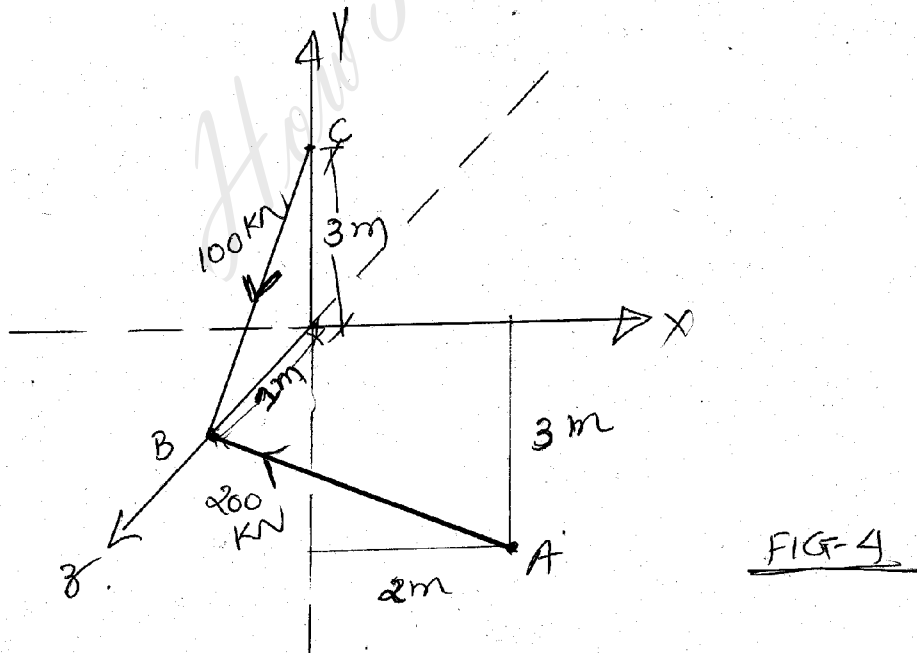
4 Answer following questions. 10

- (i) Calculate resultant force using triangular law. **fig. 4a.**
- (ii) Explain giving proper example : Shear, Axial tension.



OR

Calculate Resultant of the given force system shown in **fig-4.**



- 5 Why we use truss ? How it is beneficial ? 14
Solve the truss shown in **fig. 5**, using method of joints
OR Graphical method and tabulate your result.

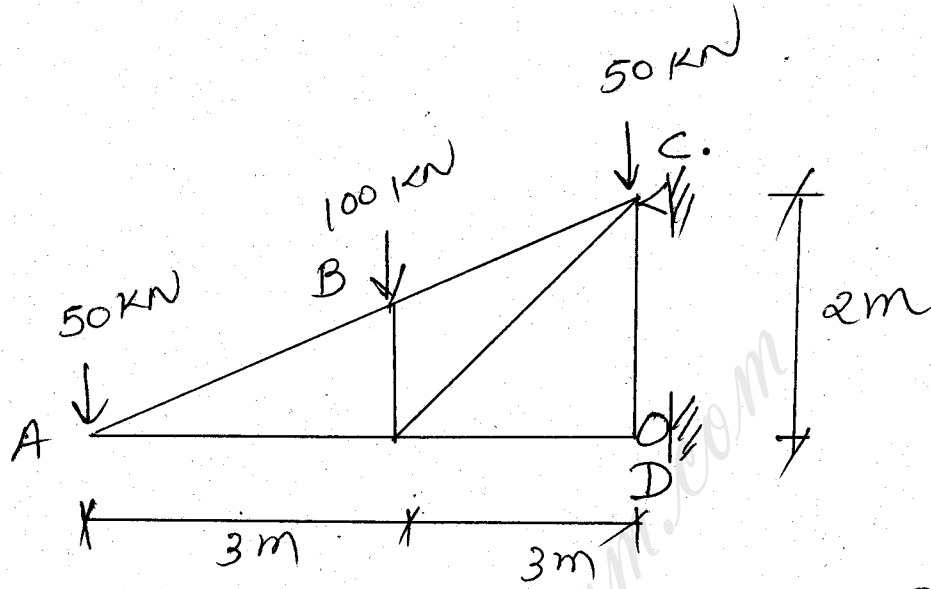


FIG-5